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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,728	01/09/2005	Casimir Johan Crawley	PU020286	9711
7590 Joseph S Tripoli Thomson Licensing Inc PO Box 5312 Princeton, NJ 08543-5312		01/24/2008	EXAMINER HU, RUI MENG	
			ART UNIT 2618	PAPER NUMBER
			MAIL DATE 01/24/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/520,728	<b>Applicant(s)</b> CRAWLEY, CASIMIR JOHAN	
	<b>Examiner</b> RuiMeng Hu	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 November 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**.

### *Response to Arguments*

2. Applicant's arguments filed on 11/09/2007 have been fully considered but they are not persuasive.

Applicant argues that **Zugert et al. (US 6466832)** or **Bowles (US Patent 6389548)** fails to teach the limitation "re-initializing a demodulated audio file signal in response to a loss of a phase lock in demodulating and setting the receiving of the modulated audio file signal at one of a plurality of channel frequencies to re-establish the phase lock in the demodulating of the audio file signal" essentially as claimed in claims 1 and 7.

Applicant further argues that any of the adjustments made in Bowles to minimize its phase errors are performed *prior* to the demodulation of its EFM waveform. However, according to the description of present application, the description fails to mention a phase lock loop and fails to describe the details of a loss of a phase lock condition in the EFM demodulation, a person of ordinary skill in the art would not recognize that how a loss of a phase lock interacts with the EFM demodulation. In addition, claims 1 and 7 are broadly claimed, accordingly the claimed limitation "a loss of phase lock" may refer to the "frequency synthesizer".

The examiner respectfully submits that Zugert et al. disclose the limitations in claims 1 and 7, (Note: under different interpretation of the prior art references), re-initializing said decoder in response to a loss of a phase lock in said demodulating of said audio file signal (column 17 lines 53-65, recites that it continues with signal acquisition, when switching from a current channel to a different channel the decoder is re-initialized to continue signal acquisition, the deployment of the current channel causes a loss of frequency/phase lock of the current channel. Since claims 1 and 7 are broadly claimed and the loss of frequency/phase lock (the deployment of the current channel) is happened in the demodulation path, thus the loss of frequency/phase lock of the current channel is considered as "a loss of a phase lock in demodulating of said audio file signal") and setting said frequency synthesizer at one of a plurality of frequencies to re-establish said phase lock in said demodulating of said audio file signal (figure 7, synthesizer 288 re-establishes said phase/frequency lock on a carrier channel to continue signal acquisition and signal demodulation).

Nonstatutory Double Patenting rejection is maintained.

### ***Response to Amendment***

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. **Claims 1-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Zuqert et al. (US 6466832)**.

Consider **claim 1**, Zuqert et al. disclose an apparatus, comprising: reception circuit including a frequency synthesizer (figure 7, a receiver 24, frequency synthesizer 326); a decoder (DSP 270) for digitally demodulating an audio file signal (abstract) from said reception circuit; and a processor (DSP 270, figure 8, column 17 line 53-column 20 line 11, consider switching from frequency f1 to f2, the DSP is re-initialized for processing received signal on channel f2 (the new channel)) for re-initializing said decoder in response to a loss of a phase lock in said demodulating of said audio file signal and setting said frequency synthesizer (frequency synthesizer 326) at one of a plurality of frequencies to re-establish receiving signal quality and said demodulating of said audio file signal (re-establishing signal processing as switched to the new frequency). Also see Response to Arguments.

Consider **claim 2 as applied to claim 1**, Zuqert et al. disclose wherein said plurality of frequencies comprises 900MHz range channel frequencies (Zuqert et al. column 16 lines 58-62).

Consider **claim 3 as applied to claim 2**, Zuqert et al. disclose wherein said plurality of frequencies comprises 905 MHz, 911 MHz, 917 MHz and 923 MHz (Zuqert et al. column 16 lines 58-62).

Consider **claim 4 as applied to claim 1**, Zuqert et al. disclose wherein said decoder comprises an eight-to-fourteen modulation EFM digital decoder. This teaching is extremely well known in the art as disclosed by Bowles (US Patent 6389548), figure 3, EFM decoder 38. Therefore, it would have been obvious to a person of ordinary skill

in the art at the time the invention was made to include an EFM digital decoder to output CD audio.

Consider **claim 5 as applied to claim 1**, Zuqert et al. fail to disclose wherein said demodulating said audio file signal provides a digital audio stream conforming to an I2S audio format.

However, official notice is taken that I2S is used for digital electronic devices (as a CD player) is well known in the art. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use I2S interface to correspond the existing digital audio stream, and output stereo.

Consider **claim 6 as applied to claim 1**, Zuqert et al. disclose wherein said processor is a microprocessor (Zuqert et al. figure 7, DSP 270).

Consider **claim 7**, Zuqert et al. disclose a computer readable storage device having software instructions recorded thereon that, (column 16 lines 33-45, the processor containing software instructions adaptively controls operation of the receiver), when executed by a processor, performs the steps of: receiving a modulated audio file signal (figure 7, Abstract); demodulating said audio file signal to a digital audio stream (figure 7, down-converters 38, base-band processors 40); re-initializing said demodulating in response to a loss of a phase lock in said demodulating of said audio file signal (DSP 270, figure 8, column 17 line 53-column 20 line 11, consider switching from frequency f1 to f2, the DSP is initialized for processing received signal on channel f2 (the new channel)); and setting said receiving of the modulated audio file signal at one of a plurality of channel frequencies to re-establish said phase lock in said

demodulating of said audio file signal (re-establishing signal processing as switched to the new frequency). Also see Response to Arguments.

Consider **claim 8 as applied to claim 7**, Zuqert et al. disclose wherein said demodulating comprises a digital eight-to-fourteen modulation EFM digital decoding of said audio file signal. This teaching is well known in the art as disclosed by Bowles (US Patent 6389548), figure 3, EFM decoder 38. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include an EFM digital decoder to output CD audio.

Consider **claim 9 as applied to claim 7**, Zuqert et al. disclose wherein said plurality of frequencies comprise 905 MHz, 911 MHz, 917 MHz and 923 MHz (Zuqert et al. column 16 lines 58-62).

Consider **claim 10 as applied to claim 7**, Zuqert et al. disclose wherein said demodulating outputs a digital audio stream (Zuqert, figure 7, digital audio stream going into D/A converter 42).

Consider **claim 11 as applied to claim 7**, Zuqert et al. disclose wherein said re-initializing and setting is carried out by a processor (Zuqert et al. figure 7, DSP 270).

### ***Nonstatutory Double Patenting***

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140



F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. **Claims 1-11** provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over **claims 1-11 of copending**

**Application No. 10516859** in view of **Zuqert et al. (US 6466832)**.

Consider **claim 1**, claim 1 claims apparatus, comprising: reception circuit including a frequency synthesizer; a decoder for digitally demodulating an audio file signal from said reception circuit; and a processor for initializing said decoder in response to a loss of a phase lock in said demodulating of said audio file signal and setting said frequency synthesizer at one of a plurality of frequencies to re-establish said phase lock in said demodulating of said audio file signal.

Claims 1-2 of the copending application disclose an apparatus for short range radio frequency communication comprising: a receiver for receiving an audio file signal; a decoder for demodulating said audio file signal; and a processor for polling said decoder for a loss of a phase lock in said demodulating of said audio file signal, wherein said processor resets and reinitializes said decoder in response to said loss in said phase lock.

However, claims 1-2 of the copending application fail to disclose a frequency synthesizer for providing a plurality of frequencies.

In the same field of endeavor, Zugert et al. disclose an apparatus for short range radio frequency communication comprising: reception circuit including a frequency synthesizer (figure 7, a receiver 24, frequency synthesizer 326); a decoder (DSP 270) for digitally demodulating an audio file signal (abstract) from said reception circuit; and a processor (DSP 270, figure 8, column 17 line 53-column 20 line 11, consider switching from frequency f1 to f2 in response to received signal quality (error rate and signal strength), the DSP is initialized for processing received signal on channel f2 (the new channel)) for initializing said decoder in response to signal quality in said demodulating of said audio file signal and setting said frequency synthesizer (frequency synthesizer 326) at one of a plurality of frequencies to re-establish receiving signal quality and said demodulating of said audio file signal (re-establishing signal processing as switched to the new frequency).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection techniques taught by Zugert et al. into the invention of the copending application as to include said frequency synthesizer for improving signal quality and output audio quality, wherein said frequency synthesizer generates a plurality of channel frequencies (902-928 MHz) to provide channel frequency diversity to overcome poor signal quality (i.e. bit error rate) in short range radio frequency communication.

Consider **claim 7**, claim 7 claims a computer readable medium containing software instructions that, when executed by a processor, performs the steps of: receiving a modulated audio file signal; demodulating said audio file signal to a digital audio stream; re-initializing said demodulating in response to a loss of a phase lock in said demodulating said audio file signal; and setting said receiving at one of a plurality of channel frequencies to establish said phase lock in said demodulating.

Claim 7 of the copending application discloses a computer readable medium containing software instructions that, when executed by a processor, perform the steps of: receiving a modulated audio file signal; demodulating said modulated audio file signal; polling said demodulating for a loss in a phase lock in said demodulating; and re-setting and reinitializing said demodulating in reply to said loss in said phase lock.

However, claim 7 of the copending application fails to disclose a frequency synthesizer for providing a plurality of frequencies.

In the same field of endeavor, Zugert et al. disclose a computer readable medium containing software instructions that, (column 16 lines 33-45, the processor containing software instructions adaptively controls operation of the receiver), when executed by a processor, performs the steps of: receiving a modulated audio file signal (figure 7, Abstract); demodulating said audio file signal to a digital audio stream (figure 7, down-converters 38, base-band processors 40); re-initializing said demodulating in response to signal quality of said demodulating said audio file signal (DSP 270, figure 8, column 17 line 53-column 20 line 11, consider switching from frequency f1 to f2 in response to received signal quality (error rate and signal strength), the DSP is initialized for

processing received signal on channel f2 (the new channel)); and setting said receiving at one of a plurality of channel frequencies to establish receiving signal quality and said demodulating of said audio file signal (re-establishing signal processing as switched to the new frequency).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection techniques taught by Zugert et al. into the invention of the copending application as to include said frequency synthesizer for improving signal quality and output audio quality, wherein said frequency synthesizer generates a plurality of channel frequencies (902-928 MHz) to provide channel frequency diversity to overcome poor signal quality (i.e. bit error rate) in short range radio frequency communication.

This is a provisional obviousness-type double patenting rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

Application/Control Number:  
10/520,728  
Art Unit: 2618

Page 12

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed**

**to:** Commissioner for Patents  
P.O. Box 1450  
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**Hand-delivered responses** should be brought to

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to RuiMeng Hu whose telephone number is 571-270-1105. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

Application/Control Number:  
10/520,728  
Art Unit: 2618

Page 13

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*RuiMeng Hu*  
R.H./rh  
January 18, 2008

  
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